

**REMARKS**

**I. Status of the Claims**

Claims 1-152 are pending in this application. Claims 1-9, 13-20, 24-26, 29, 31, 33, 35, 37-48, 151, and 152 have been examined. Claims 10-12, 21-23, 27, 28, 30, 32, 34, 36, and 48-150 have been withdrawn from consideration by the Examiner. Claims 1 and 151 have been amended, as discussed further below. No new matter has been added by these amendments, and no estoppel is intended thereby.

Applicants wish to thank the Examiner for the courtesy of a telephonic interview on October 14, 2003.

**II. Claim Rejections under 35 U.S.C. § 112, first paragraph**

Claims 6, 7, and 31 are rejected under 35 U.S.C. § 112, first paragraph for allegedly failing to satisfy the written description requirement. *Final Office Action* at pp. 2-3. Applicants respectfully traverse this rejection for reasons of record and including the additional remarks made below.

The Examiner continues to object to the phrases "derivatives of polysaccharide polymers" or "cationic starch derivatives." *See Advisory Action*. Applicants respectfully request clarification on whether these remarks are directed to the rejection under § 112, first paragraph or to the rejection under §112, second paragraph. Since the issue of "derivatives" is raised in both rejections, it is unclear to which rejection the Examiner refers in the Advisory Action. Nonetheless, Applicants respectfully maintain their position that one of ordinary skill in the art would be apprised that Applicants were in possession of the invention at the time of filing. This disclosure was in the application

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as filed. There is a strong presumption that an adequate written description of the claimed invention is present in the specification as filed. M.P.E.P. § 2163.03; *In re Wertheim*, 541 F.2d 257, 262 (CCPA 1976).

Accordingly, Applicants respectfully submit that this rejection under 35 U.S.C. § 112, first paragraph, is in error and respectfully request that the rejection be withdrawn.

**III. Rejection under 35 U.S.C. § 112, second paragraph**

Claims 6, 7, and 31 are rejected under 35 U.S.C. § 112, second paragraph for indefiniteness. *Final Office Action* at pp. 3-4. Applicants respectfully traverse the rejection.

The Examiner continues to object to "derivatives of polysaccharide polymers" or "cationic starch derivatives" and questions whether "starch is a polysaccharide derivative." *See Advisory Action*.

Applicants respectfully maintain the argument that the meaning "derivatives of polysaccharide polymers" or "cationic starch derivatives" is sufficiently clear. First, Applicants respectfully submit that starch is a well known polysaccharide and its definition needs no further explanation.

Second, definiteness is determined from the point of view of one of ordinary skill in the art. M.P.E.P. § 2173.02. The use of the word "derivative" is prevalent throughout the chemical literature. Thus, if "derivative" has a well known meaning, and "polysaccharide polymer" or "cationic starch" has a well known meaning, it follows that one of ordinary skill in the art can ascertain the meaning of "derivatives of

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polysaccharide polymers" or "cationic starch derivatives." It is not understood why, in the Examiner's view, putting together well known terms immediately renders the language indefinite. "[I]f the language used by the applicant satisfies the statutory requirements of 35 U.S.C. 112, second paragraph, but the examiner merely wants the applicant to improve the clarity or precision of the language used, the claim must not be rejected under 35 U.S.C. 112, second paragraph." M.P.E.P. § 2173.02 (emphasis in original).

Applicants respectfully submit that the well known usage of the objected to claim terms satisfies the requirements of § 112, second paragraph and respectfully request withdrawal of this rejection.

**IV. Claim Rejections under 35 U.S.C. § 102**

Claims 1-9, 16, 17, 19, 20, 24-26, 29, 31, 33, 35, 45, 46, and 47 are rejected under 35 U.S.C. is § 102(b) as anticipated by U.S. Patent No. 5,597,811 ("*Gruber*").

*Final Office Action* at pp. 4-5. Applicants respectfully traverse the rejection.

The Examiner maintains the rejection over *Gruber* because "Gruber teaches the limitations recited in claim 1." See *Advisory Action*.

Applicants respectfully disagree. Nonetheless, to expedite prosecution, independent claims 1 and 151 have been amended to add the proviso "that if the at least one compound comprising at least one C<sub>5</sub> to C<sub>7</sub> saccharide unit is chosen from polysaccharides, then the at least one amino group is unsubstituted."

In contrast, *Gruber* discloses the use of polyglucosamine derivatives. See *Gruber* at col. 1, lines 6-9 ("The present invention relates to derivatives of

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polyglucosamines."). In particular, *Gruber* describes oxirane carboxylic acid derivatives of polyclucosamines. *Id*; see also col. 3, line 48 to col. 4, line 50. *Gruber* does not describe polysaccharides having amino groups that are unsubstituted.

Accordingly, Applicants respectfully submit that the rejection under 35 U.S.C. § 102 has been overcome and request that the rejection be withdrawn.

**V. Claim Rejections under 35 U.S.C. § 103**

In order to establish a *prima facie* case of obviousness, the Examiner must demonstrate that there is some suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine reference teachings. See M.P.E.P. § 2143.

**Dunlop, Gruber and Yoshihara**

Claims 1-9, 13-20, 24-26, 29, 31, 35, and 37-48 are rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Publication No. 2002/0102228 ("*Dunlop*") in view of U.S. Patent No. 5,597,811 ("*Gruber*") and further in view of U.S. Patent No. 5,332,581 ("*Yoshihara*"). *Final Office Action* at pp. 5-6. Applicants respectfully traverse this rejection.

The Examiner states that "both [Dunlop and Yoshihara] compositions are used for hair treatment." *Final Office Action* at p. 6. Moreover, the Examiner relies on *Gruber* for "disclosing a composition that comprises glucosamine and polyquaternium-10." *Non-Final Office Action* at p. 6. In response to Applicants' previous arguments that the combination of *Dunlop* and *Gruber* is improper, the Examiner states that the

combination is proper because "both composition are used for the same purpose."

*Final Office Action* at p. 6.

Applicants respectfully disagree. First, as discussed above, *Gruber* does not teach a "composition that comprises glucosamine and polyquaternium-10" but rather the use of polyglucosamine derivatives. See *Gruber* at col. 1, lines 6-9 ("The present invention relates to derivatives of polyglucosamines."). Moreover, Applicants have amended independent claims 1 and 151 to recite "that if the at least one compound comprising at least one C<sub>5</sub> to C<sub>7</sub> saccharide unit is chosen from polysaccharides, then the at least one amino group is unsubstituted." Thus, Applicants respectfully submit that none of the references, either alone or in combination, teach or suggest this limitation, much less the claimed invention. Because all of the limitations are not taught or suggested, Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

Accordingly, Applicants respectfully request withdrawal of this rejection.

**Dunlop and Rath**

Claims 151 and 152 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2002/0102228 ("*Dunlop*") in view of U.S. Patent No. 5,993,792 ("*Rath*"). *Final Office Action* at p. 6. Applicants respectfully traverse this rejection.

The Examiner relied on *Dunlop* as above, and on *Rath* for "teaching of kits."

*Advisory Action.*

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Applicants respectfully disagree and submit that *Dunlop* teaches shampoos packaged as a single formulation. There is no suggestion or motivation to modify *Dunlop* to package ingredients separately.

Although *Rath* teaches a kit comprising separated components, *Rath* does not teach the separation of the specific components as claimed. *Rath*'s teaching applies to separating a thickener from a shampoo base. *Dunlop* teaches shampoo compositions. As a result, even if *Dunlop* and *Rath* could be combined, the combined teachings would guide one of ordinary skill in the art to package all the ingredients for a shampoo separately from the thickener. This result does not teach or suggest claim 151 because there is no suggestion or motivation from the combined teachings of *Dunlop* and *Rath* to separate the at least one compound comprising at least two quaternary ammonium groups from the at least one C<sub>5</sub> to C<sub>7</sub> saccharide unit as claimed. Thus, the combination of *Dunlop* and *Rath* does not teach each and every claim limitation as is required to establish a *prima facie* case of obviousness.

Applicants respectfully submit that a *prima facie* case has not been established and request that the rejection be withdrawn.

**Gruber and Applicants' specification**

Claims 14, 15, and 39-44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,597,811 ("*Gruber*") in view of Applicants' allegedly admitted prior art. *Final Office Action* at pp. 6-7. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the combination of *Gruber* and Applicants' specification is improper. Nonetheless, as discussed above, claims 1 and 151 have been amended to recite "that if the at least one compound comprising at least one C<sub>5</sub> to C<sub>7</sub> saccharide unit is chosen from polysaccharides, then the at least one amino group is unsubstituted." Because *Gruber* only teaches derivatives of polysaccharides and fails to describe polysaccharides where the at least one amino group is unsubstituted, the combination of *Gruber* and Applicants' specification does not teach or suggest each claim limitation.

Accordingly, Applicants respectfully submit that a *prima facie* case has not been established and request that the rejection be withdrawn.

**VI. Conclusion**

In view of the foregoing remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,  
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Date: December 17, 2003